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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,369	01/18/2002	Yasushi Hasegawa	350292001200	8088

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EXAMINER
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LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/031,369	HASEGAWA ET AL. <i>eb</i>	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael La Villa	1775	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
2. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1, 9, and 11-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - I. Regarding Claims 14-16, it is unclear whether the claimed bonding alloys of these claims are properly further limiting and include the compositional limitations of the claims from which these claims depend since there is an absence of "further comprises" language in these claims.
  - II. Regarding Claim 1, it is unclear what is meant by the phrase "along faces extending along a longitudinal axis." It is unclear what is the claimed geometrical requirement with respect to the faces and the direction of the axis. Must the surface normals of the faces be perpendicular to the longitudinal axis direction? Are the surface normals of the faces precluded from being parallel to the longitudinal axis direction? Does the referred to "faces extending along" mean something else? It is unclear how to count faces. Is the interface between any two pieces necessarily a single face?

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:
5. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
6. Claims 1, 9, and 11-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In view of applicant's various amendments and applicant's failure to identify antecedent support for the variously amended claims, it is unclear how the claimed invention is supported by the originally disclosed Specification and claims. Regarding Claim 1, it is unclear where the claimed limitations pertaining to "along faces extending along a longitudinal axis" and "ribbon" are taught. Regarding Claims 9 and 14, it is unclear where the claimed alloy is disclosed without the requirement of an oxidizing atmosphere. Regarding Claim 14, it is unclear where the claimed alloy is disclosed without the characteristics of original Claim 7. Regarding Claims 11 and 13, it is unclear where the claimed alloys used without the process limitations of original Claim 4 and characteristics of original Claim 7 are disclosed. Regarding Claims 15 and 16, it is unclear where these alloys in combination with the limitations of Claims 11 and 12 are taught. Regarding Claim 17, it is unclear where this subject matter is taught.

***Specification***

7. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).  
Correction of the following is required: It is unclear where the claimed terminology of Claim 1 that pertains to "along faces<sub>2</sub> extending along a longitudinal axis" is provided.

***Claim Objections***

8. Claim 9 is objected to because of the following informalities: The dependent limitation of Claim 9 should be presented as a clause beginning with a word such as the deleted word "wherein." Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

10. A person shall be entitled to a patent unless –

11. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 12, 13, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimizu et al. USP 6,592,154. Shimizu et al. teaches bonding precision machined metal parts at faces that extend along the longitudinal axis with a nickel based alloy using liquid phase bonding techniques. See Shimizu (Figures 1(c), 1(e), and 1(f); col. 5, line 35 through col. 6, line 44; col. 8, line 13

through col. 10, line 15). The insert material is described as BNi-3, which is a Ni based alloy that further comprises B and Si. See Lally USP 3,876,447 (col. 3, lines 66-68). That the amorphous quality of the bonding alloy is not explicitly taught does not obviate rejection. The alloy is not taught by Shimizu as not being amorphous. Furthermore, since the alloy is treated to form a bonded product, it would be expected that, upon diffusion treatment, the amorphous quality of the starting material would not be retained. Hence, the claimed articles that are to result from amorphous bonding alloy starting material would be expected to structurally and compositionally encompass the articles of Shimizu.

#### ***Response to Amendment***

- I. Applicant has provided a new Abstract, thereby obviating the objection to the Abstract of the Office Action mailed on 3 July 2003.
- II. In view of applicant's amendments and arguments, applicant has traversed the section 112, first paragraph rejection of the Office Action mailed on 3 July 2003. While applicant has amended the claims to address this rejection, applicant has not pointed to specific portions of the originally filed disclosure that support the invention as now claimed, and so the rejections persist.
- III. In view of applicant's amendments, applicant has traversed the section 112, second paragraph rejections of the Office Action mailed on 3 July 2003. While applicant has amended the claims to address these

rejections, rejections persist for the reasons given in the rejections above.

- IV. In view of applicant's amendments and arguments, applicant has traversed the section 102 rejection over Hasegawa '860 of the Office Action mailed on 3 July 2003. Rejection is withdrawn.
- V. In view of applicant's amendments and arguments, applicant has traversed the section 103 rejection over Hasegawa '577 of the Office Action mailed on 3 July 2003. Rejection is withdrawn.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1775

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael La Villa  
February 20, 2004

A handwritten signature in black ink, appearing to read 'La Villa', is positioned to the right of the typed name and date.